

304 3/8

Work Order ID 141907

141907

Page 1

Friday, February 19, 2016 10:37:28 AM

Item ID: 606.7815

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Plunger

Start Date: 2/22/2016 Start Qty: 5.00

5

Cust Item ID:

Required Date: 3/1/2016 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start *NR1*

QC:

Date:

SPC (Y/N):

Date:

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
606.7800	

100

0.00

100

Doosan

Doosan Lathe

MORI SEIKI CNC LATHE LARGE

Memo

Turn blank as per DWG
DWG REV: N/C

DEBURR

0.03

5

0

DAS

45

9-89

2016-03-02

110

0.00

110

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

5

0

DAS

45

9-89

2016-03-02

120

0.00

120

QC

Quality Control

QC8- Inspect parts - second check

Memo

0.00

5

0

DAS

40

9-89

16/03/03

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐						
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval			
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY								
Environment ☐	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design ☐	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data ☐	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling ☐	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre ☐	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material ☐	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport ☐	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge ☐	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA ☐	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation ☐	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date ☐	☐	Manufacturing Process	OTHER :							
Misidentified ☐	☐	Past Due								

Work Order ID 141907***141907***

Page 2

Friday, February 19, 2016 10:37:28 AM

Item ID: 606.7815

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Plunger

Start Date: 2/22/2016 Start Qty: 5.00

5

Cust Item ID:

Required Date: 3/1/2016 Req'd Qty: 5.00

5

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID Tool # Plan Code Accept Qty Reject Qty Reject Number Insp. Stamp

130

130

Packaging

Packaging

Packaging

Memo

LOCATION: MAT060

0.00

0.00

sold

DAS
6
9-09

MAR 03 2016

140

140

QC

Quality Control

QC21- Final Inspection - Work Order Release

Memo

0.00

0.00

MCS

MAR 03 2016

MCS

MAR 03 2016

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER : _____							
Misidentified ☐	☐ Past Due								

Picklist Print

Page 1

Friday, February 19, 2016 10:37:28 AM

Work Order ID: 141907

141907

Parent Item: 606.7815

606 7815

Parent Item Name: Plunger

Start Date: 2/22/2016

Required Date: 3/1/2016

Start Qty: 5.00

Required Qty: 5.00

Comments: IPP REV:A NEW ISSUE 15.05.04 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304R0.375		Purchased		No			f	19.2080		0.436842			

M304R0 375

304 ROUND BAR 0.375

Location

Loc Qty

Loc Code

MAT

16

M134213

16

MAT028

3.208

M132209

3.208

0.5 PI

DAS

45 2016-03-02

9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

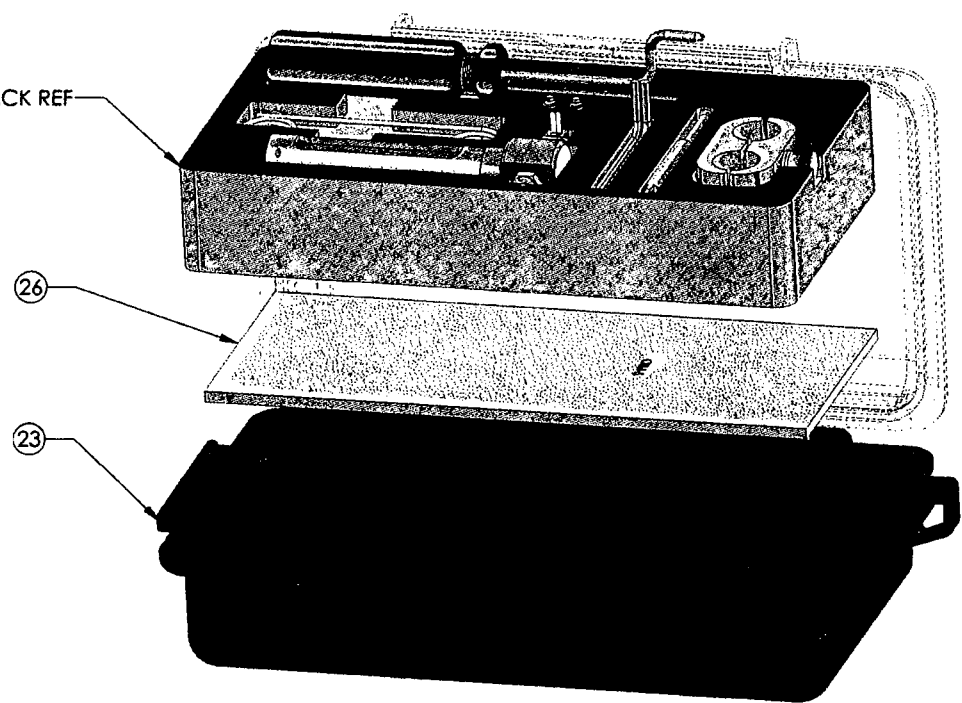
PRINTED COPY OF THIS DOCUMENT IS FOR REFERENCE ONLY AND IS UNCONT

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NOTES:

1. IDENTIFY PER MPP-120.
2. MATERIAL: AISI TYPE 304 STAINLESS STEEL.
3. APPLY ANTI-SIEZE AS REQUIRED.
4. MATERIAL: MCMASTER CARR P/N 8860K26. BEND .6IN WIRE INTO SPECIFIED SHAPE.
5. MAKE FROM P/N 601.3825 SCREW DRIVER. BEND BLADE SHAFT TO SHAPE AND DIMENSIONS SHOWN.
6. MATERIAL: 600.0062 FOAM.
7. APPLY LABELS P/N 601.3830 & 601.3831 AS SHOWN.
8. FINISH IAW MPP-172: ELECTROPOLISH PER SECTION 7.0 PASSIVATE PER SECTION 6.0

FOAM PACK REF

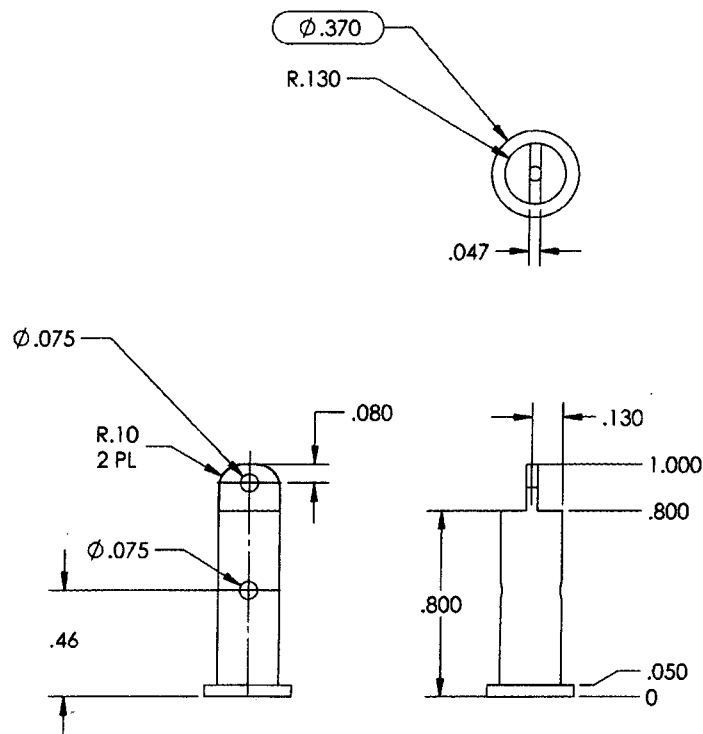


606.7803

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
1	LAST PROTOTYPE REVISION: PPS		N/C
N/C	INITIAL RELEASE	11-24-15	P. BRAVO

OPERATION INSTRUCTIONS			
1	-	26	QIM-5
1	-	25	601.3831
1	-	24	601.3830
1	-	23	601.3829
1	-	22	606.7822
1	-	21	606.7821
1	-	20	606.7820
1	-	19	601.3824
1	-	18	601.3823
1	-	17	601.3822
3	-	16	601.3821
1	-	15	601.2591
1	-	14	601.3796
2	-	13	601.2937
1	-	12	606.7814
1	-	11	601.3775
1	-	10	606.7815
1	-	9	645.6910
1	-	8	606.7810
1	-	7	645.7710
1	1	6	601.1084
1	1	5	601.3819
1	1	4	601.3867
1	1	3	606.7819
1	1	2	606.7823
2	-	1	606.7818
X			606.7803
X	1		606.7802
X			606.7801
7803,7802,7801	FIND #	PART #	DESCRIPTION
QTY			
NEXT ASSY (S)			
NONE			
ORIGINAL DATE			
11/24/15			
DRAWN BY			
J. BECKER			
DRAWING APPROVAL			
P. BRAVO			
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED			
DIMENSIONS ARE IN INCHES			
TOLERANCES ARE			
2 PLACE DECIMALS .XX			
3 PLACE DECIMALS .XXX			
ANGLES ± .2°			
PARTS LIST			
DART 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300			
APICAL INDUSTRIES INC. DBA DART AEROSPACE			
PULL CABLE TEST FIXTURE-DART VALVE			
REV.	CAGE CODE	DWG NO.	REV.
B	07M26	606.7800	N/C
SCALE NONE		SHEET 1 OF 11	

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606.781.5
PLUNGER

ORIGINAL DATE (MM/DD/YY)	11/2/11	DART 3030 ENTERPRISE CT., AEROSPACE SUITE A VISTA, CA 92081 (760)-724-5300	
DRAWN BY J. DECKER	DESIGNED P. BRAVO	APICAL INDUSTRIES, INC. DBQ DART AEROSPACE	
DRAWING APPROVAL P. BRAVO	11/2/11	PULL CABLE TEST FIXTURE-DART VALVE	
CONTRACT NO.		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±0.010 3 PLACE DECIMALS 1.001 ANGLES ±.5°	
SRT	CAGE CODE B 07M26	DWG. NO. 606.7800	REV. N/C
SCALE NONE		SHEET 5 OF 11	

INSPECTION SHEET

Rev	Date	Change	Revised by	Approved
B	14.07.31	New Issue	KJ	



Apical Industries, Inc.
dba Dart Aerospace
3030 Enterprise Ct., Suite A
Vista, CA 92081-8347
T 760 724 5300
F 760 509 1562

Change Order

Order #: P1559
Prepared By: Sarah Arango
Date Printed: 2/17/2016
Time: 11:02:02 AM
of Items: 6
Page: 1

Purchased From:
DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA



Ship To:
Apical Industries, Inc.
dba DART Aerospace
3030 Enterprise Court
Suite A
Vista, CA 92081
United States

REPLY WITH
CONFIRMATION
OF ORDER

PO Date: 2/16/2016 Cust Ref#: E-MAIL REQ JACO Vendor #: DAL1 Customer:
Need Date: 0 Terms: NET 30 DAY Phone #: 1-613-632-3336 Fax #: 1-613-632-4443
Remarks: E-MAIL REQ JACOB. B CABLE KITS Resale: YES Resale #:
Insure?: Please Insure Ship Via: UPS GROUND Account: FOB: ON

Change Order -- Do Not Duplicate

Item	Part Number/Description	CD	Qty	Req Date	Unit Price	Line Amt
1	606.7819 CLAMP HALF REV NC	NE	5.00	3/2/2016	\$88.50 EA	\$442.50
2	606.7815 PLUNGER REV NC	NE	5.00	3/2/2016	\$68.50 EA	\$342.50
3	606.7821 TEST PULL ROD REV NC	NE	5.00	3/2/2016	\$52.50 EA	\$262.50
4	606.7810 PULL ROD HOUSING REV NC	NE	5.00	3/2/2016	\$92.50 EA	\$462.50
5	606.7814 PLUNGER CAP REV NC	NE	5.00	3/2/2016	\$60.50 EA	\$302.50
6	DAS TRANSFER PRICE 15 TRANSFER PRICE ALL PARTS TO BE DONE WITH NO PASSIVATION AND NO ELECTROPOLISHING. SA 2/17/2016 THIS PO IS FOR RESALE OR NON-TAXABLE SERVICE. PLEASE DO NOT ADD SALES&USE TAX TO ANY ITEM ON THIS PO. PLEASE CONTACT ME IF THERE ARE ANY DELAYS OR IF YOU HAVE ANY QUESTIONS.		1.00		\$271.88	\$271.88

Quality Assurance Clauses

Refer to Document # AIPWI-7.4.1QCS Latest Revision for applicable clauses checked below

☒ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☒ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☒ 11 ☒ 12
☒ 13 ☒ 14 ☐ 15 ☒ 16 ☐ 17 ☐ 18 ☒ 19 ☒ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24
☐ 25 ☐ 26 ☐ 27 ☐ 28 ☒ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☒ 35 ☐ 36
☐ 37 ☐ 38 ☐ 39 ☐ 40

Item Total: \$1,812.50

Authorized Signatures: See Below

See last page for totals

Purchasing:

QC:

Production:



Apical Industries, Inc.
dba Dart Aerospace
3030 Enterprise Ct., Suite A
Vista, CA 92081-8347
T 760 724 5300
F 760 509 1562

Change Order

Order #: P1559
Prepared By: Sarah Arango
Date Printed: 2/17/2016
Time: 11:02:02 AM
of Items: 6
Page: 2

Purchased From:
DART AEROSPACE LTD
1270 ABERDEEN STREET
HAWKESBURY, ON K6A 1K7
CANADA

Ship To:
Apical Industries, Inc.
dba DART Aerospace
3030 Enterprise Court
Suite A
Vista, CA 92081
United States

PO Date: 2/16/2016 Cust Ref#: E-MAIL REQ JACO Vendor #: DAL1 Customer:
Need Date: 0 Terms: NET 30 DAY Phone #: 1-613-632-3336 Fax #: 1-613-632-4443
Remarks: E-MAIL REQ JACOB. B CABLE KITS Resale: YES Resale #:
Insure?: Please Insure Ship Via: UPS GROUND Account: FOB: ON

Change Order -- Do Not Duplicate

Item	Part Number/Description	CD	Qty	Req Date	Unit Price	Line Amt
	ALWAYS INCLUDE PACKING SLIP WITH SHIPMENT. Sarah Arango Dart Aerospace Phone: 760-509-1608 Fax: 760-758-9612 sarango@dartaerospace.com					

Quality Assurance Clauses

Refer to Document # AIPWI-7.4.1 QCS Latest Revision for applicable clauses checked below

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9 ☐ 10 ☐ 11 ☐ 12
☐ 13 ☐ 14 ☐ 15 ☐ 16 ☐ 17 ☐ 18 ☐ 19 ☐ 20 ☐ 21 ☐ 22 ☐ 23 ☐ 24
☐ 25 ☐ 26 ☐ 27 ☐ 28 ☐ 29 ☐ 30 ☐ 31 ☐ 32 ☐ 33 ☐ 34 ☐ 35 ☐ 36
☐ 37 ☐ 38 ☐ 39 ☐ 40

Item Total: \$1,812.50

Charges: \$271.88

Total: \$2,084.38

US Dollars

Authorized Signatures: See Below

dba3030R3

Purchasing:

QC:

Production: